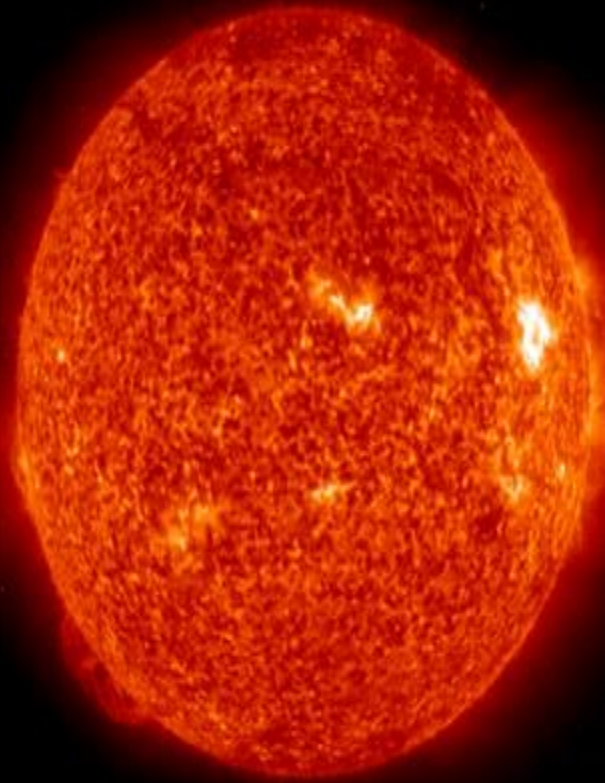


The **Sun** is where it all starts...



# The Sun Heats the Earth...

## The Earth Heats the Air

Incoming Solar Radiation passes through the atmosphere and is absorbed by the Earth's surface.

Outgoing Terrestrial Radiation is absorbed by the atmosphere.

Cold

Cool

Warm





# Uneven Heating of the Earth

Oblique Rays *(Less Radiation Received)*



Vertical Rays *(More Radiation Received)*



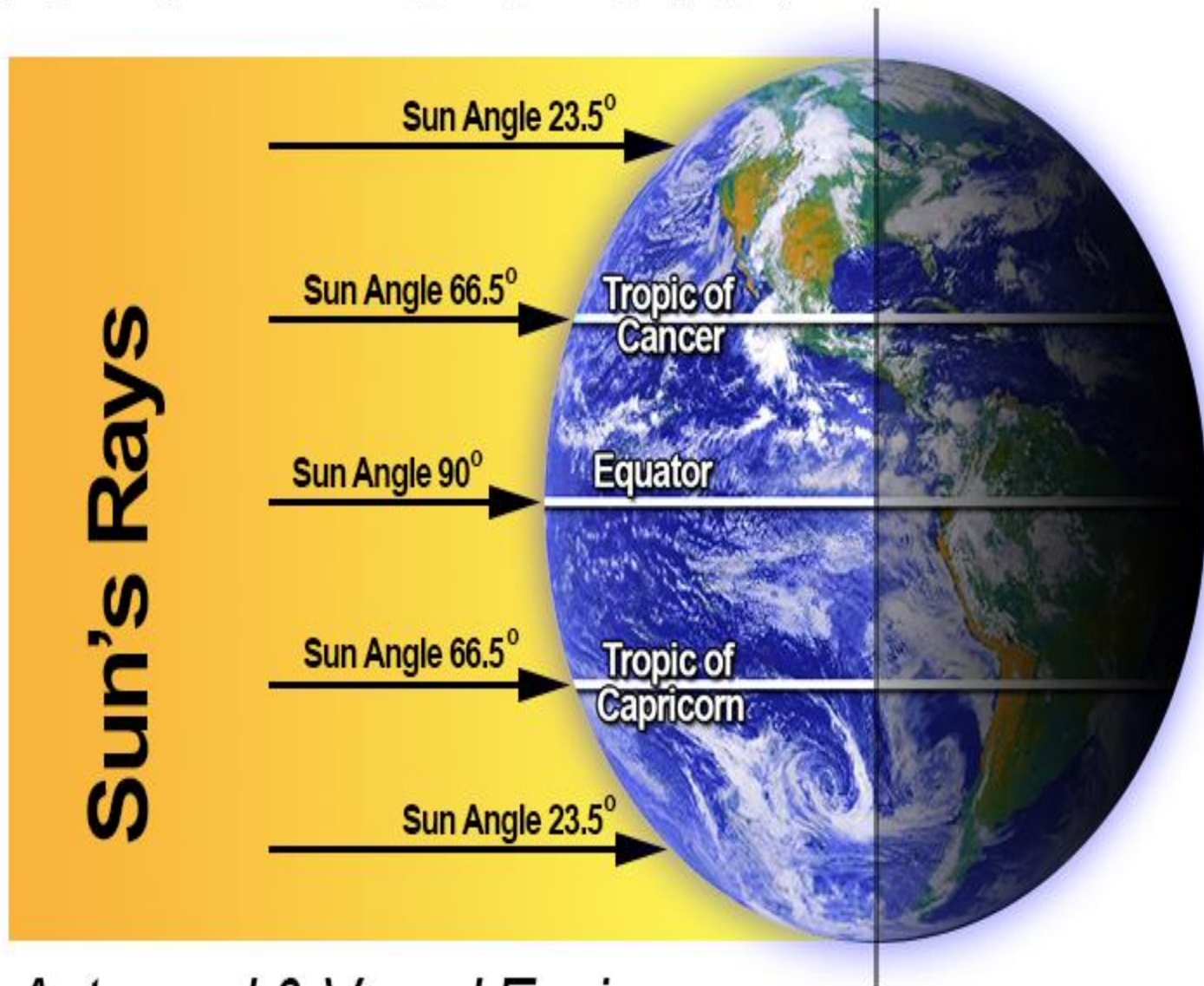
Oblique Rays *(Less Radiation Received)*



**Equatorial Regions are Warmer** *(Higher Sun Angles)*

**Polar Regions are Colder** *(Lower Sun Angles)*

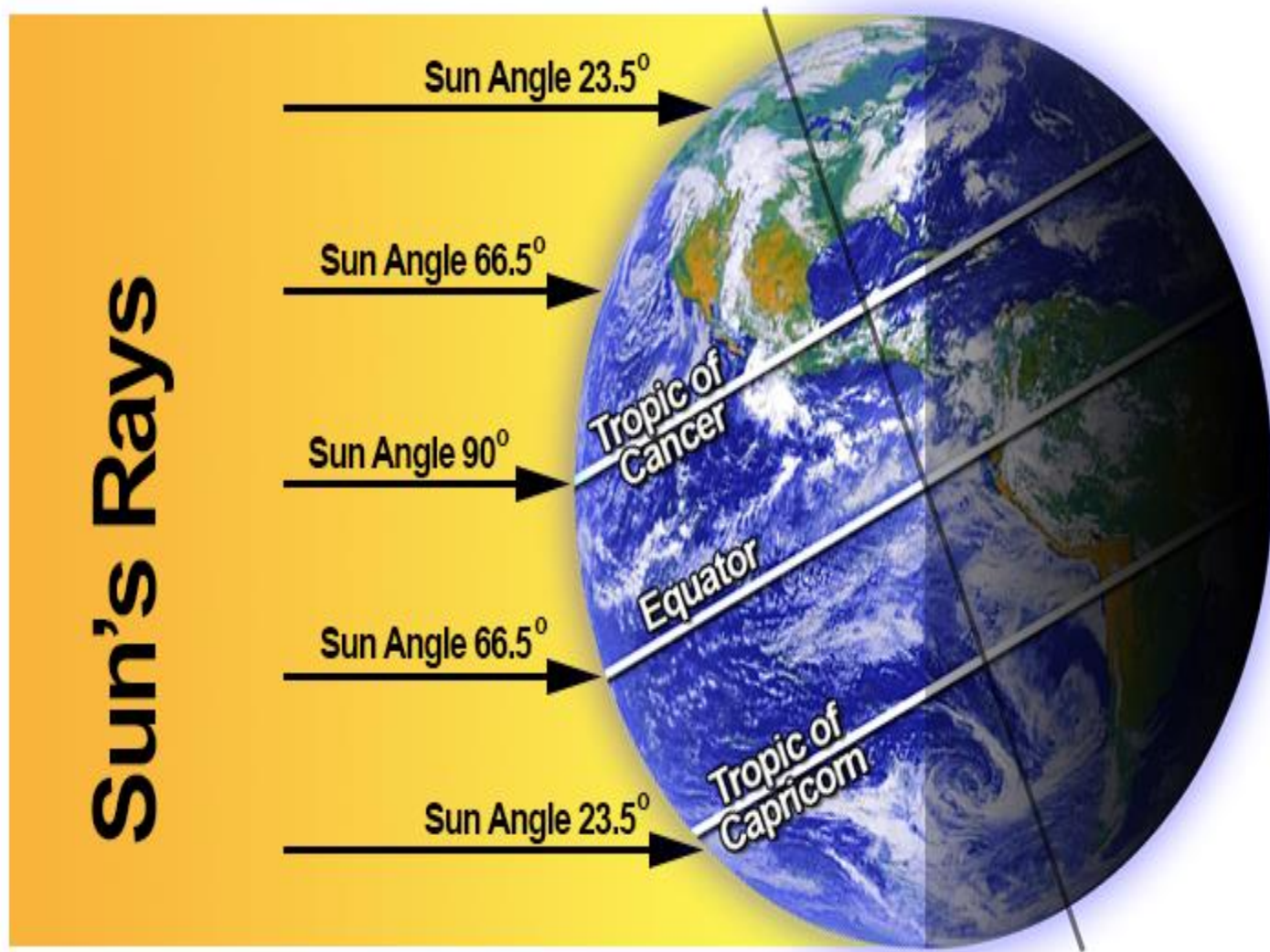
# Seasonal Differences *(Due to Earth's Axial Tilt)*



*Autumnal & Vernal Equinox*

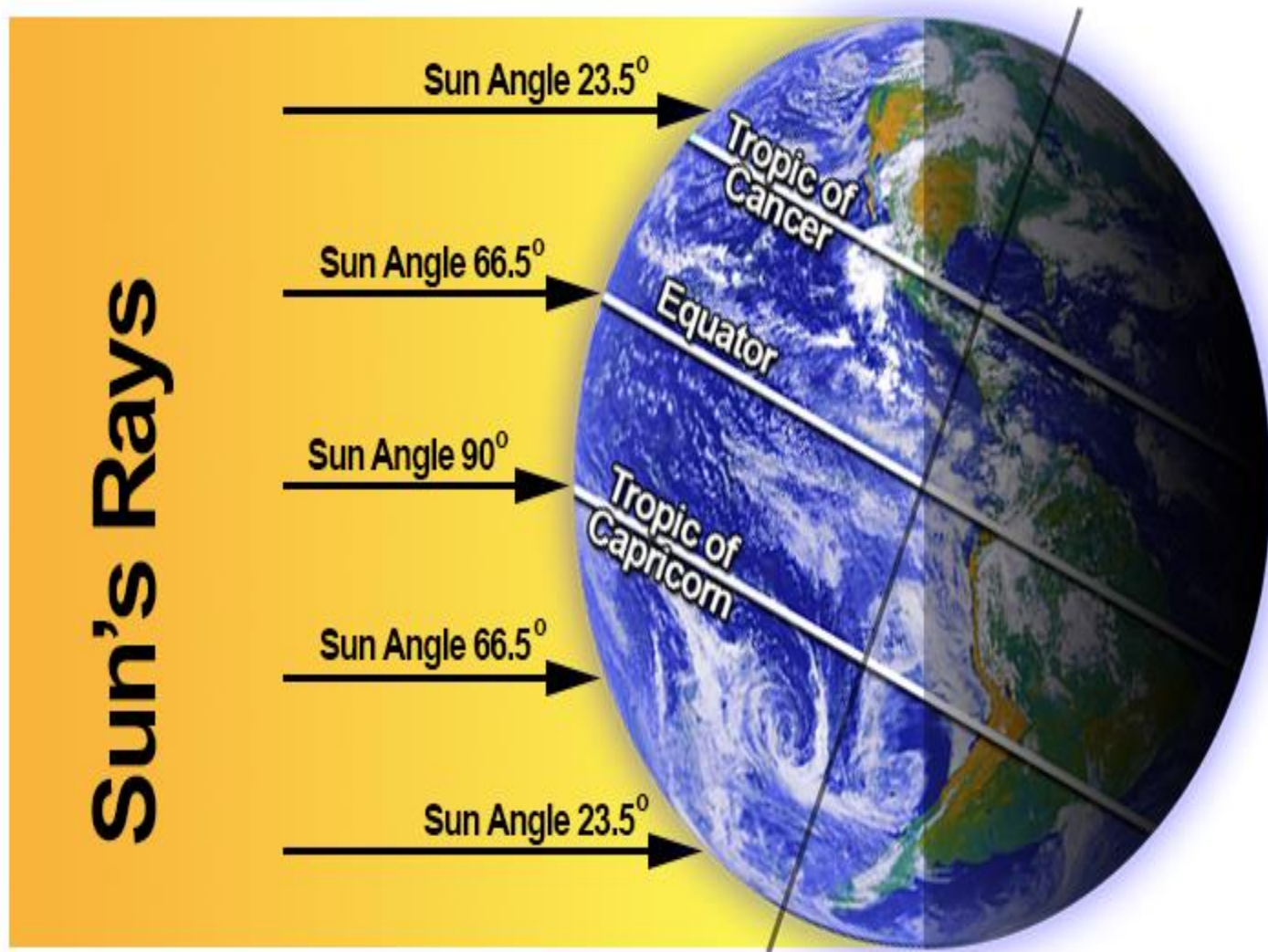


# Seasonal Differences *(Due to Earth's Axial Tilt)*



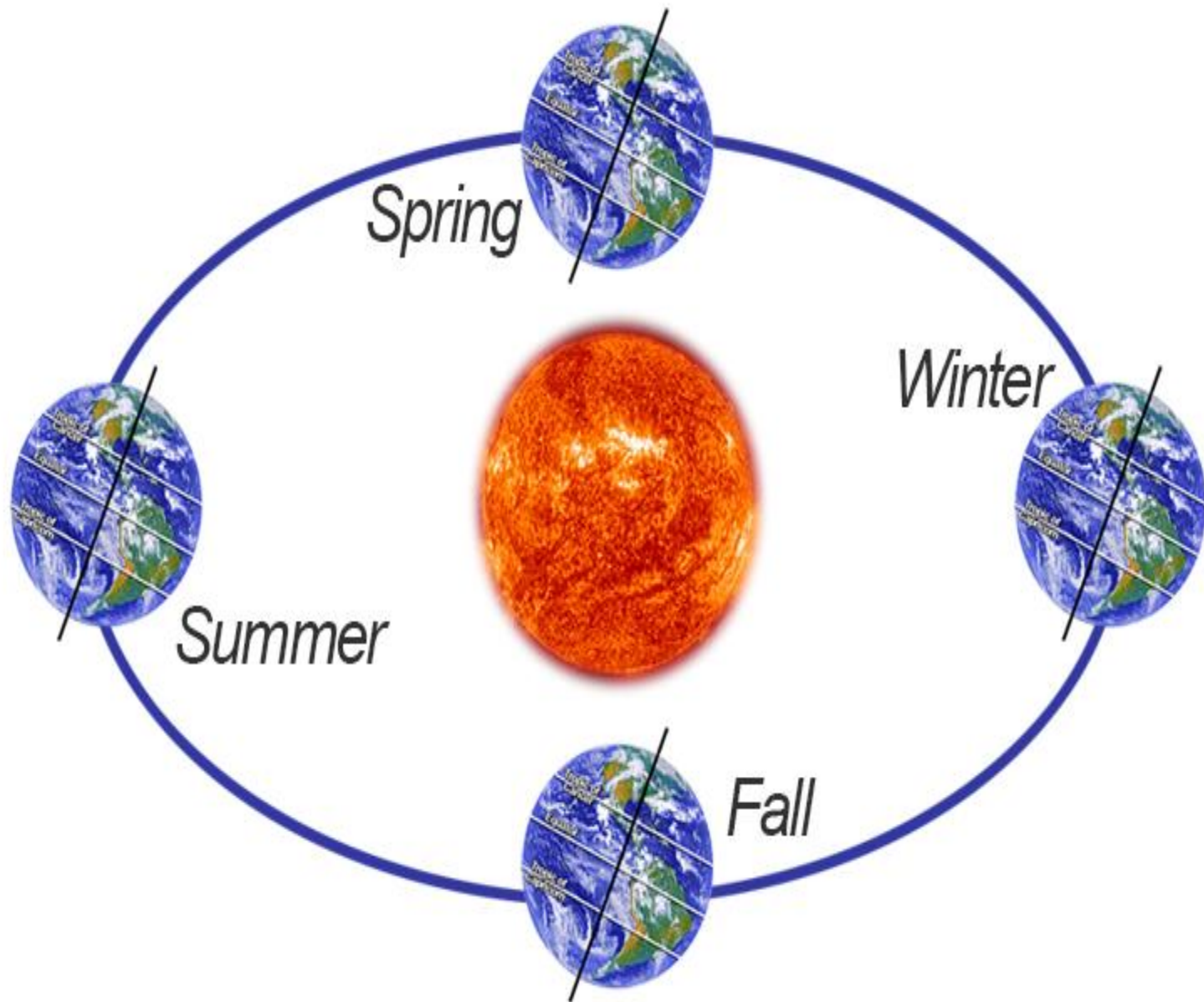
*Summer Solstice*

# Seasonal Differences *(Due to Earth's Axial Tilt)*



*Winter Solstice*

# Seasons Change as Earth Revolves Around the Sun





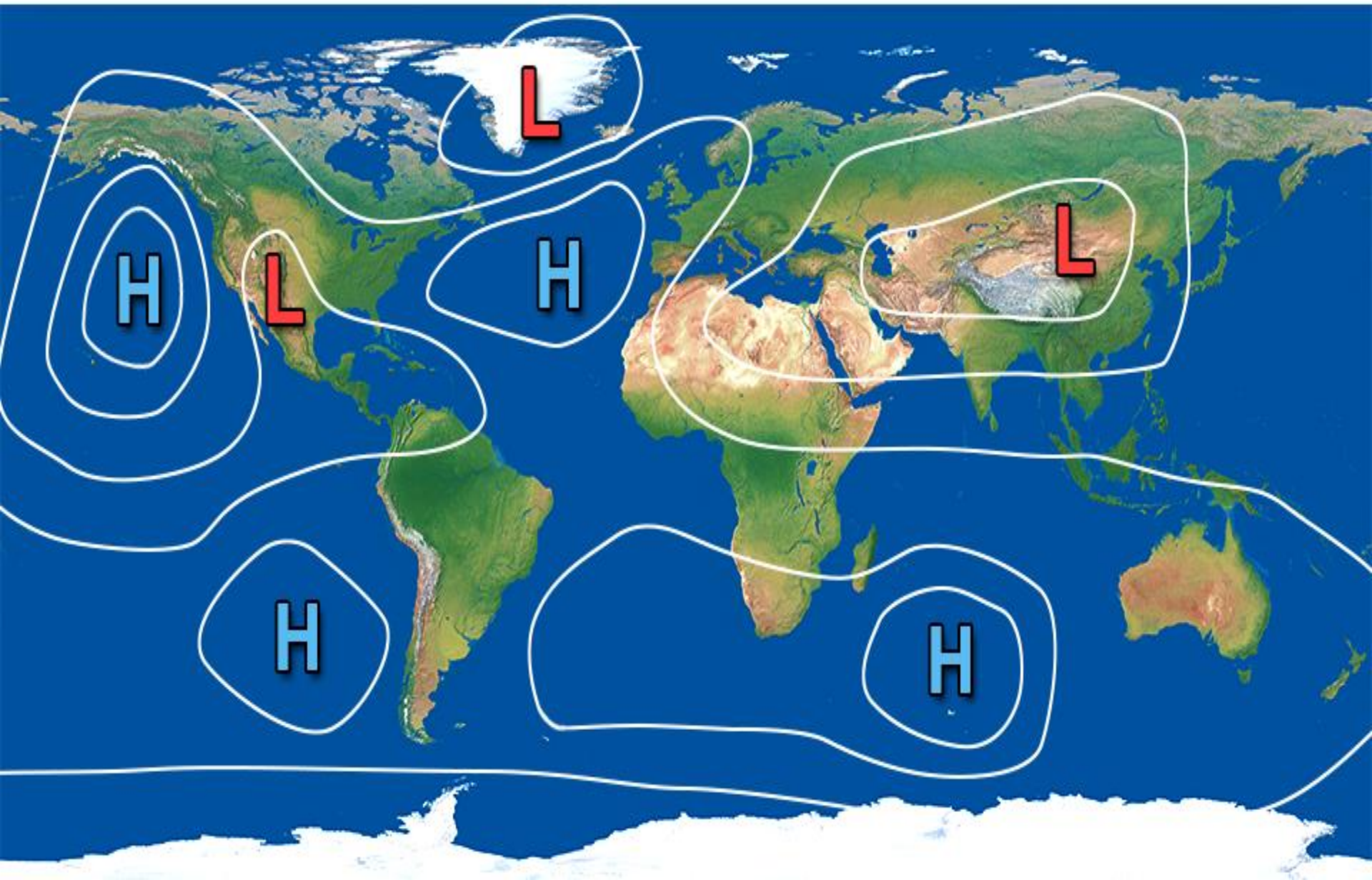
# Land & Water Heat Differently

- ✓ Land heats faster and to higher temperatures than water
- ✓ Land also cools faster and to lower temperatures than water





# Uneven Heating = Uneven Pressure Distribution



# Pressure & Wind

**Air moves from High to Low Pressure**

*Moving air is called "WIND"*

**H**

*High Pressure*

**COOL**



**L**

*Low Pressure*

**WARM**